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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/773,908	02/05/2004	Seock-Hwan Kang	21C-0086	8595
23413	7590	11/29/2005	EXAMINER	
CANTOR COLBURN, LLP 55 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002			ALEMU, EPHREM	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/773,908

Applicant(s)

KANG ET AL.

Examiner

Ephrem Alemu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-64 is/are pending in the application.
- 4a) Of the above claim(s) 57-64 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-14, 16-31, 33-38, 40-47, 49-51 and 53-56 is/are rejected.
- 7) ☒ Claim(s) 8, 15, 32, 39, 48 and 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I in the reply filed on 8/24/05 is acknowledged

The restriction requirement is deemed proper and is therefore made **FINAL**.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-56, drawn to a lamp; a lamp assembly and an image display including the lamp, classified in class 315, subclass 56.
- II. Claims 57-64, drawn to a method of manufacturing a lamp, classified in class 445, subclass 26.

The inventions are distinct, each from the other because of the following reasons:

Inventions of Group II and Group I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the lamp of Group I can be made without forming a fluorescent layer on an inner surface of a lamp body as required in Group II.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 5-7, 9, 10, 12-14 and 16-25 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (US Pub. 2005/0218783).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Re claims 1, 5 and 14, Kim discloses a lamp (100) for emitting light (Figs. 1-8) comprising:

a lamp body (110) in which a discharge gas (125) is injected (Figs. 3-8; abstract; page 2, paragraph [0035]);

first and second electrodes (130, 150) disposed at opposite end of the lamp body, the first and second electrodes receiving current externally provided, wherein the first electrode includes:

a first member (136, 137) that receives a first end portion of the lamp body (110), the first member being electrically conductive (Figs. 3-8; abstract; page 2, paragraph [0035] to paragraph [0047]); and

a second member (200) disposed between the first member (136, 137) and the lamp body (110), the second member (200) having metallic solder and being coated on the first end portion of the lamp body to provide adhesion between the first member (136, 137) and the lamp body (110) (Figs. 3-8; abstract; page 2, paragraph [0035] to paragraph [0047]; wherein the second member of the first electrode is airtightly formed to prevent a void gap between the first member and the lamp body).

Re claim 2, Kim further discloses wherein the first member (136, 137) of the first electrode (130) has a tube shape of which opposite ends (136a, 137a) are open to receive the first end portion of the lamp body (Figs. 3-8).

Re claim 3, Kim further discloses the first member (136, 137) of the first electrode (130) includes one of nickel, nickel alloy, brass or a mixture thereof (paragraph [0037]).

Re claims 6 and 7, Kim further discloses the second member (200) of the first electrode has a melting point lower than a melting point of the first member (136, 137) of the first electrode (130) and wherein the metallic solder of the second member (200) includes one of leadless metal mixed with tin and zinc, lead mixed with silver, lead, lead alloy, and a mixture thereof (Figs. 2-8; paragraphs [0037], [0041], [0042]).

Re claims 9 and 10, Kim further discloses the first member (136, 137) of the first electrode (130) has a tube shape having opposite ends of which one is open and the other is closed and wherein a size of entire inner surface of the first member (136, 137) of the first

electrode (130) is substantially identical with a size of entire outer surface of the second member (200) of the first electrode (130) (Figs. 1, 6-8).

Re claims 12, 13, 14, 16 and 17, Kim further discloses the second electrodes (150) has the same structure as the first electrode (130). Therefore, claims 12, 13, 14, 16 and 17 are rejected for the same reason for the structure of the first electrode as discussed above in claims 1, 2, 5, 9 and 10.

Re claim 18, Kim further discloses the second electrode (170) includes:

a third member (172) disposed in a second end portion of the lamp body (100), the third member (172) receiving a driving voltage externally provided (Fig. 10A; paragraphs [0014], [0056]); and

a fourth member (i.e., adhesive member 200) that receives the second end portion of the lamp body (100) in which the third member (172) is disposed, the fourth member (i.e., adhesive member 200) having a contact part through which the third member (172) is in contact with an electric source providing the driving voltage (Fig. 10A; paragraphs [0014], [0056]).

Re claims 19-21, Kim further discloses the third member (172) of the second electrode (170) includes:

an electrode body disposed (170a) in the discharge gas of the lamp body (100); a lead wire (170b) that transfers the driving voltage to the electrode body (170a); and a sealing member (i.e., solder 174) that seals the second end portion of the lamp body to prevent a leak of the discharge gas and for holding the lead wire; wherein the sealing member has a conduit through which the lead wire is extended from the electrode body to the fourth member (i.e., adhesive member 200); wherein the contact part of the fourth member (i.e., adhesive member 200) of the

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second electrode is a hole through which the lead wire is extended to be in contact with the electric source (Fig. 10A; paragraphs [0014], [0056]).

Re claims 22 and 23, Kim further discloses the lead wire (170b) is soldered at the hole of the fourth member (i.e., adhesive member 200) of the second electrode (170); and wherein the electrode body (170a) has a cup shape having opposite ends of which one is open and the other is closed and connected with the lead wire (170b) (Fig. 10A; paragraphs [0014], [0056]).

Re claim 24, Kim further discloses the electrode body is made of material including one of copper, nickel, nickel alloy, and a mixture thereof (Fig. 10A; paragraphs [0014], [0056], [0059])

Re claim 25, Kim discloses a light assembly (Fig. 12) for providing light, comprising:

a lamp (300) including.

a lamp body (110) in which a discharge gas (125) is injected (Figs. 3-8; abstract; page 2, paragraph [0035]);

first and second electrodes (130, 150) disposed at opposite end of the lamp body, the first and second electrodes receiving current externally provided, wherein the first electrode includes:

a first member (136, 137) that receives a first end portion of the lamp body (110), the first member being electrically conductive (Figs. 3-8; abstract; page 2, paragraph [0035] to paragraph [0047]); and

a second member (200) disposed between the first member (136, 137) and the lamp body (110), the second member (200) having metallic solder and being coated on the first end portion of the lamp body to provide adhesion between the first member (136, 137) and the lamp body (110) (Figs. 3-8; abstract; page 2, paragraph [0035] to paragraph [0047]);

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a voltage applying module (not shown in the figure) that receives the driving voltage from an external source and providing the driving voltage to the first and second electrodes of the lamp (Figs. 1, 3-8; 12; abstract; page 2, paragraphs [0035] to [0047]; paragraphs [0063] to [0065]); and

a receiving container (400) that receives and securely holds the lamp (lamps 300) and the voltage applying module (Fig. 12; paragraphs [0063] to [0065]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). This rejection might also be overcome by showing that the

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reference is disqualified under 35 U.S.C. 103(c) as prior art in a rejection under 35 U.S.C.

103(a). See MPEP § 706.02(l)(1) and § 706.02(l)(2).

5. Claims 26-31, 33-38, 40-47, 49-51, and 53-56 are rejected under 35 U.S.C. 103(a) as being obvious over Kim et al. (US Pub. 2005/0218783).

Re claims 26, 27, 28, 30, 36, 37 and 46, Kim discloses an image display device (LCD apparatus 800) for displaying images using light internally provided (Fig. 12), comprising:

a display panel (LCD panel 600) to display images using the light and image data externally provided (Fig. 12; paragraph [0063],

a light assembly (i.e., plurality of lamps 300 received in a receiving container 400) to provide the light, the light assembly comprising:

a lamp (300) including:

a lamp body (110) in which a discharge gas (125) is injected (Figs. 3-8; abstract; page 2, paragraph [0035]);

first and second electrodes (130, 150) disposed at opposite end of the lamp body, the first and second electrodes receiving current externally provided, wherein the first electrode includes:

a first member (136, 137) that receives a first end portion of the lamp body (110), the first member being electrically conductive (Figs. 3-8; abstract; page 2, paragraph [0035] to paragraph [0047]); and

a second member (200) disposed between the first member (136, 137) and the lamp body (110), the second member (200) having metallic solder and being coated on the first end portion of the lamp body to provide adhesion between the first member (136, 137) and the lamp body (110) (Figs. 3-8; abstract; page 2, paragraph [0035] to paragraph [0047]; wherein the second

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member of the first electrode is airtightly formed to prevent a void gap between the first member and the lamp body).

Kim does not show all the detailed structure of the voltage applying module, the receiving container, and holding members for securely holding the display panel and the light assembly. However, it is well within the skill of artisan at the time the invention was made to provide such structural modification for the purpose of securely holding the light assembly and the display panel. As an example see Hur et al. (US P2004/0232853); Yoo et al. (US 6,905,224); and Cho et al. (US 6,674,250).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the voltage applying module, the receiving container, and holding members of Kim's image display device (LCD apparatus 800) as claimed for no other reason than supplying power voltage to the plurality of lamps and securely holding the display panel and the light assembly.

Re claims 29-31, 33-35, 38, 40-46, 47, 49-51, and 53-56, the language of the claims with respect to the structure of the first and second electrodes have been discussed above in claims 2, 7, 10, 12, 13, 14, 16, 18, 19, 20, 21 and 25 in view of Kim. Therefore, claims 29-31, 33-35, 38, 40-46, 47, 49-51, and 53-56 have been rejected for the same reason given above in claims 2, 7, 10, 12, 13, 14, 16, 18, 19, 20, 21 and 25.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being obvious over Kim et al. (US Pub. 2005/0218783) in view of Jung et al. (US Pub. 2004/0263042).

Re claim 4, Kim does not disclose the first member (136, 137) of the first electrode includes a gold film coated on a surface of the first member (136, 137).

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Jung teaches of using metal materials such as gold for forming an electrode around the outer surface a lamp for the purpose of generating an electric discharge in the lamp tube (Fig. 2; paragraphs [0088], [0005]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Kim's first member (136, 137) of the first electrode with gold film coated on a surface since Jung teaches the use of metal material such as gold in forming electrode around the outer surface a lamp for no other reason than generating an electric discharge in the lamp tube.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being obvious over Kim et al. (US Pub. 2005/0218783) in view of Takeda et al. (US Pub. 2004/0178731).

Re claim 11, Kim does not mention about the first member (136, 137) of the first electrode having a thickness in a range from about 0.1 mm to 0.2 mm. .

Takeda discloses an external electrode with a thickness of 0.1 mm for the use of an outside electrode discharge lamp (Fig. 4; paragraphs [0026]).

It would have been well in the skill of artisan at the time the invention was made to modify the range of the thickness of the first member (136, 137) of the first electrode of Kim's lamp for no other reason than supplying the power voltage to the discharge tube.

Allowable Subject Matter

8. Claims 8, 15, 32, 39, 48 and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

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The prior art of record fail to teach or suggest, alone or in combination, the following limitations: "wherein the first or second end portion of the lamp body has a rough surface on which the second or fourth member of the first electrode is coated, the rough surface increasing adhesion between the first end portion of the lamp body and the second member of the first electrode" in a manner claimed in claims 8, 15, 32, 39, 48 and 52.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F Flex hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don K Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TUYET VO
PRIMARY EXAMINER

EA
11-22-05